

## **REMARKS**

Reconsideration of the application is respectfully requested in view of the amendments and the discussion presented below. The amendments are supported by the application as filed and no new matter has been added by any of the amendments.

Claims 1, 11, and 12 are amended by adding the limitation "wherein the pit level represents a level of the optical beam reflected from the optical disk while the optical beam is forming a pit during the test recording operation." Support for this limitation will be found in the specification as filed at page 11, lines 23-26.

The specification is amended to correct obvious errors (see Figures 6A and 6B and the corresponding text in the specification of the application as filed).

Claims 1, 4, 5, and 7-12 are now present in this application.

## **Discussion**

### **1. Interviews with Examiner Gupta**

Examiner Gupta is thanked for conducting interviews with the undersigned attorney on January 19 and 22, 2007. The interview summary (PTOL-413) mailed on January 29, 2007 concerning the first interview is believed to be an accurate summary of the result of the first interview. In the second interview, Examiner Gupta confirmed that she had conferred with her supervisor and said that he agreed that the claims of this application might be allowable if the independent claims were amended to define the "pit level."

**2. The Rejection of Claims 1, 4, 5, 7, and 10-12 over Yanagawa in view of Yamanaka and Furukawa**

The Examiner rejected claims 1, 4, 5, 7, and 10-12 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication 2001/0026522 to Yanagawa ("Yanagawa") in view of U.S. Patent 6,771,584 to Yamanaka ("Yamanaka") and U.S. Patent 6,643,230 to Furukawa.

As amended, independent claim 1 includes the following limitations:

a spherical aberration correcting unit configured to correct the spherical aberration according to the optimum correction amount of the spherical aberration,

wherein the characteristic obtaining unit is configured to detect a pit level and at least one of a read level, a write level and a recording power according to a light reflected from the optical recording medium while the test recording unit performs the test recording, wherein the pit level represents a level of the optical beam reflected from the optical disk while the optical beam is forming a pit during the test recording operation, and to obtain the characteristic of the pit ratio, the parameter including the pit level, the read level, the write level and the recording power, the pit ratio representing the ratio of one of the read level or the write level to the pit level.

As amended, independent claim 11 includes the following limitations:

a control unit configured to, when detecting that the optical recording medium is set to the information recording apparatus, make control the

spherical aberration correcting apparatus to correct the spherical aberration, wherein the characteristic obtaining unit is configured to detect a pit level and at least one of a read level, a write level and a recording power according to a light reflected from the optical recording medium while the test recording unit performs the test recording, wherein the pit level represents a level of the optical beam reflected from the optical disk while the optical beam is forming a pit during the test recording operation, and to obtain the characteristic of the pit ratio, the parameter including the pit level, the read level, the write level and the recording power, the pit ratio representing the ratio of one of the read level or the write level to the pit level.

As amended, independent claim 12 includes the following limitation:

detecting a pit level and at least one of a read level, a write level and a recording power according to a light reflected from the optical recording medium while the test recording is performed, wherein the pit level represents a level of the optical beam reflected from the optical disk while the optical beam is forming a pit during the test recording operation; and

obtaining the characteristic of the pit ratio, the parameter including the pit level, the read level, the write level and the recording power, the pit ratio representing the ratio of one of the read level or the write level to the pit level.

The Examiner agreed in the interviews with the undersigned attorney that neither of the cited references teaches or suggests this subject matter and suggested that

the claims be amended to define "pit level" so as to further point out and distinguish the invention. This has been done.

It is respectfully submitted that none of the cited references teaches or suggests at least the detection of a "pit level" as defined in the independent claims: "wherein the pit level represents a level of the optical beam reflected from the optical disk while the optical beam is forming a pit during the test recording operation" as part of a spherical aberration correction apparatus (claim 1), a "spherical aberration correcting apparatus" (claim 11) or a "spherical aberration correcting method" (claim 12).

It is further submitted that Furukawa does not teach calculation of a pit ratio as claimed because the tracking servo gain measuring circuit 12 of Furukawa determines the ratio of the servo residual error value to the amplitude width of the disturbance signal itself, and the disturbance signal is not one of the read level, the write level, and a recording power.

The Examiner is also referred to the discussion on pages 11-13 of the amendment and response mailed on August 7, 2006 in this application, which was directed to the previous rejection over Yanagawa in view of Yamanaka and Furukawa, and further explained how the limitations of claim 6 (incorporated into claims 1, 11, and 12) were not taught or suggested by any of Yanagawa, Yamanaka, and/or Furukawa.

The rejection of claims 1, 4, 5, 7, and 10-12 as being unpatentable over Yanagawa in view of Yamanaka and Furukawa should be withdrawn.

**3. The Rejection of Claim 8 over Yanagawa in view of Yamanaka and Furukawa, and further in view of Hayashi**

The Examiner rejected claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Yanagawa in view of Yamanaka and Furukawa as applied to claims 1 and 7, and further in view of U.S. Patent Publication 2001/0040853 to Hayashi, et al. ("Hayashi").

Claim 8 depends from claim 1 and is allowable for at least that reason. The rejection of claim 8 should be withdrawn.

**4. The Rejection of Claim 9 over Yanagawa and Furukawa in view of Yamanaka and further in view of Nishi**

The Examiner rejected claim 9 under 35 U.S.C. § 103(a) as being unpatentable over Yanagawa in view of Yamanaka and Furukawa as applied to claim 7 and further in view of U.S. Patent Publication 2004/0174781 to Nishi ("Nishi").

Claim 9 depends from claim 1 and is allowable for at least that reason. The rejection of claim 8 should be withdrawn.

**Conclusion**

In view of the above, the Applicants submit that the application is now in condition for allowance and respectfully urge the Examiner to pass this case to issue. The Examiner is respectfully invited to telephone the undersigned attorney as needed in order to advance the examination of this application.

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The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account no. 12-0415. In particular, if this response is not timely filed, then the Commissioner is authorized to treat this response

as including a petition to extend the time period pursuant to 37 CFR 1.136(a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 12-0415.

I hereby certify that this correspondence is being deposited with the United States Post Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on February 22, 2007.

Trisha Lozano


(Name of Person Transmitting)

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February 22, 2007

(Date)

Respectfully submitted,



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